

# Biosciences Career Pathway

MISSOURI ECONOMIC RESEARCH & INFORMATION CENTER  
MISSOURI DEPARTMENT OF HIGHER EDUCATION  
& WORKFORCE DEVELOPMENT  
APRIL 2022

## What are Career Pathways?

Career Pathways are groups of occupations within a career field. Occupations within a pathway share common skills, knowledge, and interests. The pathways use industry-recognized credentials and are examples of how different levels of training or education can help provide opportunities for career advancement.

### Missouri Numbers:

-  **2,787 Employers**
-  **44,896 Workers**
-  **\$71,979 Average Wage**

### Why Have a Career in Biosciences?

Developments in biotechnology rapidly change the way we live, work, and learn. Missouri has a strong presence in Plant and Agricultural Technology, Biomedicine, and Companion and Feed Animal Sciences. Biosciences represents 1.97 percent of total private sector employment, employing over 44,000 workers in 2,787 businesses in 2020. Employment has been growing at an average of 1.6 percent per year from 2015 to 2020. Missouri has high employment concentrations in Biosciences, particularly in Animal Food Manufacturing, Hog & Pig Farming, and Agricultural Chemical Manufacturing. Biosciences industry wages averaged \$71,979 in 2020, higher than the state average of \$54,801 for all industries.

From research to production, there are a variety of innovative and rewarding careers in the Biosciences fields of Production, Research & Development, and Animal Sciences.

### Know the Basics

Biosciences deals with how living things work and interact with each other, and teaches how to ask questions, make observations, and solve problems. Soft skills, such as interpersonal skills, professionalism, and dependability are important in all industries and occupations, including Biosciences. Biosciences deals heavily with research and production, so knowledge of mathematics and scientific principles is a must. Safety and quality control are a critical part of this industry, so attention to detail and continuous learning are necessary.

### Skills needed for Success:

Biosciences has a set of industry-wide technical competencies that represent the knowledge and skills necessary to be successful in this industry. Research and development; manufacturing process design and development; knowledge of medical devices, drugs, and pharmaceuticals; as well as knowledge of agricultural feedstock and chemicals are some of the skills that may be needed for success.

### Who's Hiring in Missouri?

**Bayer Corporation**  
**Millipore Corporation**  
**Pfizer**  
**Stryker Medical**  
**Bunge**



## Now

### Short-Term On-the-Job Training

### Production

### Research & Development

### Animal Sciences

**Helpers-Production Workers**  
Entry: \$25,930; Average: \$31,420

**Weighers, Measurers, Checkers, & Samplers, Recordkeeping**  
Entry: \$31,920; Average: \$39,340

**Farmworkers, Farm, Ranch, & Aquacultural Animals**  
Entry: \$24,980; Average: \$31,230

**Certificates:** Forklift Operator

**Degrees:** Chemistry  
**Certificates:** American Society for Quality (ASQ), Certified Quality Auditor

**Certificates:** Certified Manager of Animal Resources

## Next

### Certificate, Associate Degree, Apprenticeship, Moderate- to Long- Term On-the-Job Training

**First-Line Supervisor of Production Workers**  
Entry: \$45,300; Average: \$61,220

**Industrial Machinery Mechanics**  
Entry: \$44,710; Average: \$55,480

**Chemical Equipment Operators & Tenders**  
Entry: \$34,590; Average: \$47,860

**Chemical Technicians**  
Entry: \$36,100; Average: \$47,550

**Agricultural & Food Science Technicians**  
Entry: \$35,430; Average: \$48,550

**Inspectors, Testers, Sorters, Samplers, & Weighers**  
Entry: \$35,430; Average: \$47,030

**Veterinary Technologists & Technicians**  
Entry: \$25,860 Average: \$33,640

**Veterinary Assistants & Laboratory Animal Caretakers**  
Entry: \$25,100; Average: \$31,330

**Degrees:** Industrial Mechanics and Maintenance  
**Certificates:** Commercial Driver's License, Chemical Operator

**Degrees:** Chemistry  
**Certificates:** American Society for Quality (ASQ), Certified Quality Auditor

**Certificates:** Veterinary Technician/Technologist, Laboratory Animal Technician

## Later

### Bachelor's Degree or Advanced Degree

**Industrial Production Managers**  
Entry: \$80,440; Average: \$109,430

**Chemists**  
Entry: \$52,030; Average: \$78,020

**Veterinarians**  
Entry: \$66,330; Average: \$88,090

**Chemical Engineers**  
Entry: \$90,040; Average: \$111,840

**Medical Scientists**  
Entry: \$51,470; Average: \$79,870

**Degrees:** Engineering, Business Administration & Management

**Degrees:** Chemistry, Clinical Laboratory Science/Technologist, Chemical Engineering

**Degrees:** Animal Sciences, Horticultural Operations, Veterinary Medicine

## Sources:

EMSI Burning Glass Technologies Labor/Insight™ tool

Employment and Training Administration, Competency Model Clearinghouse

2020 Occupational Employment Survey Wage data, U.S. Bureau of Labor Statistics

Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics

Top employers data is based on 2021 online job ads

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